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Prehabilitation for Shoulder Dysfunction in Breast Cancer

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Et al.

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BACKGROUND

Prehabilitation is “a process on the continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment, includes physical and psychological assessments that establish a baseline functional level, identifies impairments, and provides targeted interventions that improve a patient’s health to reduce the incidence and severity of current and future impairments.” (*Silver et al.*)

MATERIALS & METHODS

Design: Feasibility study with two non-blinded groups randomized by timing of appointment

Setting: single site academic tertiary medical center

Participants: 60 cancer patients were randomly assigned to either Group 1, n=36, in-person teaching arm or Group 2, n= 24, video-only teaching arm. 45 patients completed the study.

Interventions: Shoulder exercises were assigned to both groups 1 month prior to surgery during breast center evaluation.

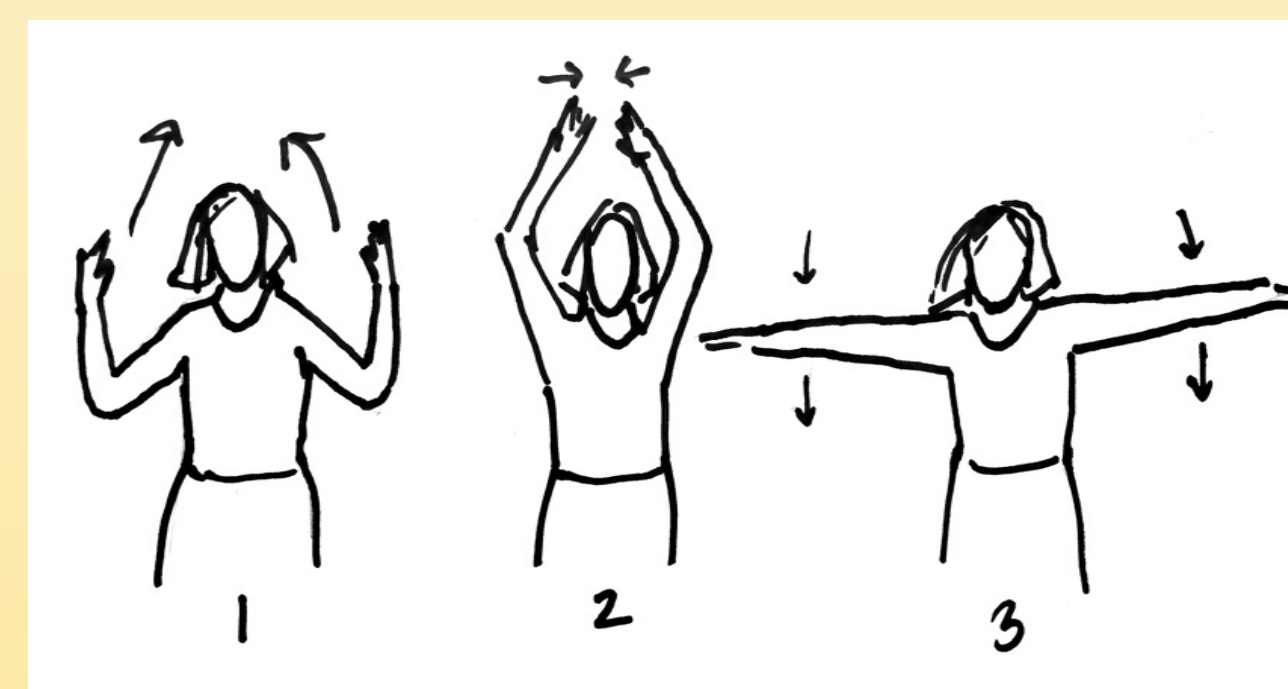
Group 1 received in-person instruction on exercises, plus an information sheet with exercises and a link to an on-line video.

Group 2 received only the information sheet with exercises and a link to the on-line video.

Main Outcome Measurements: Exercise compliance, shoulder pain (via visual analog pain scale), and shoulder abduction range of motion (via goniometer), and presence or absence of seroma.

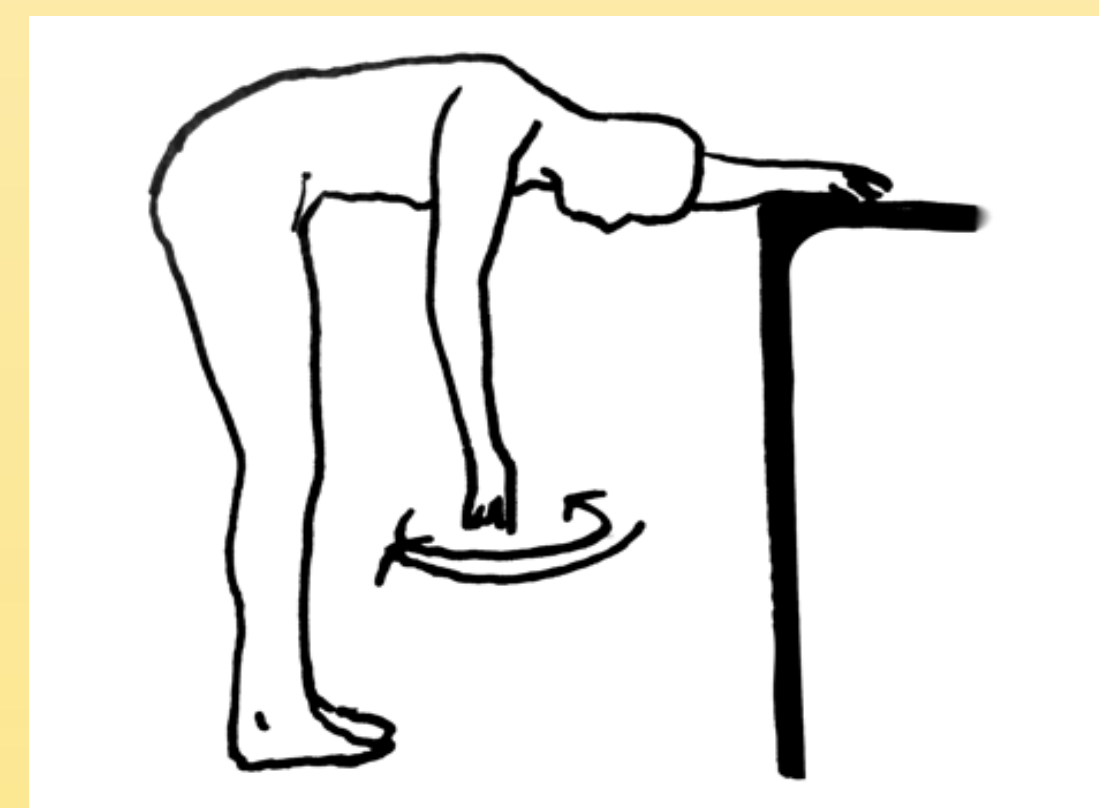
RESULTS

- 75% of patients chose to exercise. There was no difference in exercise compliance between in-person teaching vs. video teaching. (75%, 24/32 vs 77% 10/13, OR = 1.03)
- 66% of subjects (20/30) lost greater than 10 degrees of shoulder abduction ROM at 1month post surgery.
- 29% of patients (9/31) had worse shoulder pain than baseline at one month post-surgery (24% of exercisers and 50% of non-exercisers.)
- 15% of patients (4/27) had worse shoulder pain than baseline at 3 months after surgery
- Prehabilitation exercise program inferred no additional risk of seroma formation (Exercisers 21%, 7/33 vs. non-exercisers 22%, 2/9, OR=.94).

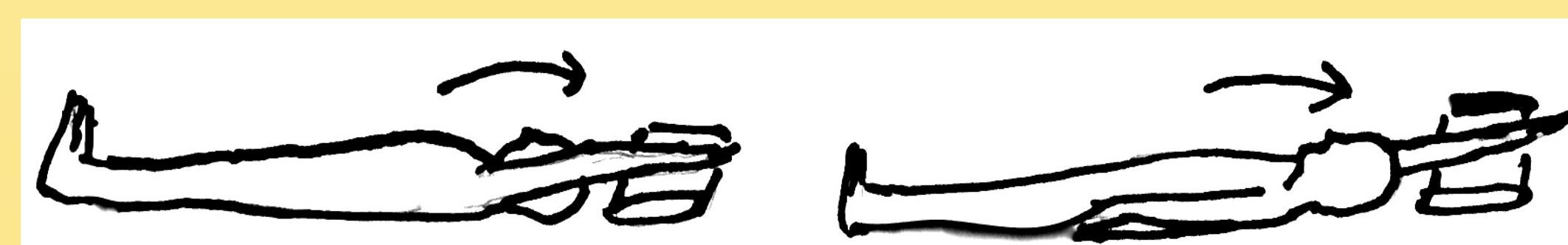


Scapular squeezes

Codman's exercise



Reach for the pillow



CONCLUSIONS

- ◆ In-person teaching does not appear superior to video teaching for prehabilitation exercises in breast cancer patients.
- ◆ Prehabilitation exercises may not increase risk of seroma formation after breast cancer surgery.

Limitations included:

- Variable length to follow-up evaluation of pain and range of motion,
- Variable length of time with postoperative drain,
- Lack of stringent control of types of surgery (mastectomy vs lumpectomy) and other independent exercise performed by subjects.

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